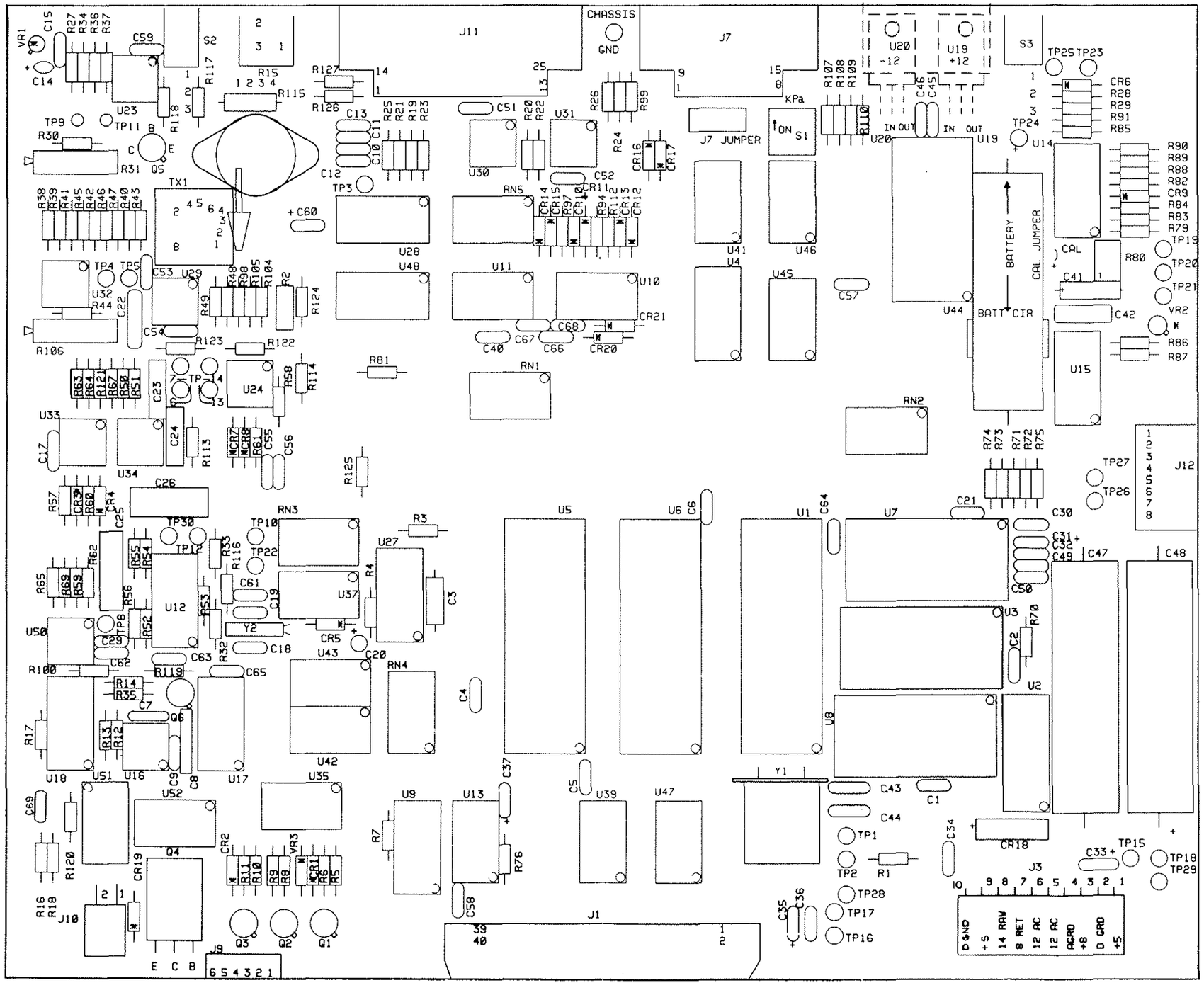
TABLE 10-1
System Alarms Summary Table

Pulse Display	All Other Displays	Led Indicators	Printer Output	Audio Tone	Audio Volume	Cancel Switch	Probable Cause	Operator Action
Flashes 899 continuously	BLANK	ALARM flashes, all others remain unchanged	"899 DETERMINATION UNSUCCESSFUL"	Alternating HI/LO	Adjustable	Stops audio, stops flashing	Monitor unable to make determination due to insufficient signal	Refer to troubleshooting in Section 11
888 for 1 sec.	888 for 1 sec.	All toggle on and off	Prints new heading	Alternating (3)HI/(2)LO for 1 second	Adjustable	Has no effect	Normal at power-up or power interruption	If power interruption, Check power cord connections Reset mode, alarm limits, and cycle time
888 for 1 sec.	888 for 1 sec.	—	Prints new heading	Alternating HI/LO 1 sec	Adjustable	Has no effect	More than 3 min in Calibration Mode	If you desire to remain in Calibration Mode, turn power off and then on while pressing SET for 20 sec.
BLANK	BLANK	—	None	Continuous HIGH	Maximum Unmutable	Has no effect	Microprocessor Failure	Refer to troubleshooting in Section 11
Flashes 877 Continuously	BLANK	—	"877 ROM FAILURE" (if able)	Alternating HI/OFF	Adjustable	Has no effect	Read-Only Memory Failure	Refer to troubleshooting in Section 11
Flashes 866 Continuously	BLANK	—	"866 RAM FAILURE" (if able)	Alternating HI/OFF	Adjustable	Has no effect	Random Access Memory Failure	Refer to troubleshooting in Section 11
Flashes 855 until next determination	BLANK	ALARM flashes, all others remain unchanged	"855 EXCESS TIME: ONE PRESSURE LEVEL"	Alternating HI/LO	Adjustable	Stops audio, stops flashing	At one pressure level for more than 60 sec.	Check for kinked hoses. Refer to troubleshooting in Section 11
Flashes 844 until next determination	BLANK	ALARM flashes, all others remain unchanged	"844 EXCESS TIME: TOTAL READING"	Alternating HI/LO	Adjustable	Stops audio, stops flashing	Determination time has exceeded 120 sec.	Restrain patient movement. Check patient for arrythmia. Relocate cuff to another limb. Check blood pressure by an alternate method
Flashes 833 until next determination	BLANK	ALARM flashes, all others remain unchanged	"833 EXCESS TIME: INFLATION"	Alternating HI/LO	Adjustable	Stops audio, stops flashing	Inflation time has exceeded 30 sec.	Check for leaks in cuff and hose connections. Refer to troubleshooting in Section 11
Flashes 822 continuously	BLANK	ALARM flashes, all others remain unchanged	"822 NEEDS PRESSURE CALIBRATION	Alternating HI/OFF	Adjustable	Has no effect	Microprocessor is unable to get proper zero offset	Refer to calibration check in Section 9
Flashes 811 continuously	BLANK	ALARM flashes, all others remain unchanged	"811 VOLTAGE OUT OF LIMITS"	Alternating HI/OFF	Adjustable	Has no effect	One or more internal supply voltage is out of tolerance	Refer to troubleshooting in Section 11
Flashes 802 continuously	BLANK	ALARM flashes, all others remain unchanged	"802 CHECK INTERNAL SWITCHES"	Alternating HI/OFF	Adjustable	Has no effect	Incorrect Internal switch settings	Refer to troubleshooting in Section 11
Flashes 800 continuously	BLANK	ALARM flashes, all others remain unchanged	"800 EXCESS PRESSURE"	Alternating HI/OFF	Adjustable	Has no effect	Overpressure detected	Refer to troubleshooting in Section 11


CHASSIS
GND
J11
J7
J7 JUMPER
KPa
ON S1
S1
S2
S3
U20
-12
U19
+12
IN OUT
IN OUT
BATTERY
CAL JUMPER
BATT CIR
CAL
TP25 TP23
TP24
TP19
TP20
TP21
VR2
TP9
TP11
TP4
TP5
TP3
TP30
TP10
TP22
TP12
TP8
TP14
TP13
TP27
TP26
TP1
TP2
TP28
TP17
TP16
TP15
TP18
TP29
TX1
U23
U24
U26
U27
U28
U29
U30
U31
U32
U33
U34
U35
U36
U37
U39
U41
U42
U43
U44
U45
U46
U47
U48
U50
U51
U52
U1
U2
U3
U4
U5
U6
U7
U8
U9
U10
U11
U12
U13
U14
U15
U16
U17
U18
Y1
Y2
Q1
Q2
Q3
Q4
Q5
Q6
RN1
RN2
RN3
RN4
RN5
VR1
VR3
J1
J3
J9
J10
J12
D GND
+5
14 RAW
8 RET
12 AC
12 AC
AGND
+8
D GRD
+5
E C B
6 5 4 3 2 1
B
C
E

CPU BOARD

TRUTH TABLE S1			
S1-1	S1-2	S1-3	OPTIONS
O	O	O	ENGLISH
O	I	O	GERMAN
I	I	I	SPARE
I	O	O	FRENCH
I	I	O	SPANISH
O	O	I	ITALIAN
I	O	I	BRITISH
O	I	I	SPARE

S1-4 kPa = 1 mmHg = 0

NOTES:
1. UNLESS OTHERWISE SPECIFIED
   A. RESISTANCE VALUES ARE IN OHMS. 1/4W, 5%
   B. CAPACITOR VALUES ARE IN MICROFARADS
   C. OP-AMPS ARE TL082 PIN8 = +12V PIN4 = -12V
   D. DIODES ARE TYPE IN4148
2. ALL UNDESIGNATED GROUNDS ARE DIGITAL GNDS.

△3 R98 P/N 662-142

CPU BOARD

SCHEMATIC

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SA5/6

U1
8085 MICROPROCESSOR

U2
74LS373
ADDRESS
LATCH

U3
2764
ROM 1

U4
74LS138
HIGH
ORDER
ADDRESS
DECODE

U7
ADC
0808
A/D
CONVERTER

U8
ROM 1
2764

U18
LS74
(FLIP-FLOP)

U27
1408
D/A CONVERTER

U28
4051
DIA
MUX

U37
uPD
1990AC
REAL TIME
CLOCK

U41A
LS74
(FLIP-FLOP)

U44
8251A
USART

U45A
LS32

U45B
LS32

U45C
LS32

U45D
LS32

U5B
8155
I/O PORT
#1

U9C
4049

U30A
TL082

U30B
TL082

U31A
TL082

U31B
TL082

OVP U51-10 (3D7)

CPU RESET Ø U14-7 (1D4) U51-6 (2D8)

KEY HIT 1 U11-8 U5-2 (1A5)

500 HZ

+5V

CLOCK 2 OUT U6-6 (3C7)

DISPLAY ENABLE Ø U45-3 (2C3)

(1C1) PTCL U33-6

FPTCL U24-6 (1C1)

+12V

-12V

A/D READ 1 U39-6 (2C2)

U6-34 (3A8)

+5 A/D

+5V A/D

OUTPUT SELECT PRINTER-1/COMPUTER-Ø → U11-5 (3D3)

USART READY

TXD-1 → U10-4 (3C4)

RTS-Ø → U10-10 (3C4)

DTR-Ø → U10-12 (3C2)

RXD-1 → U11-4 (3D6)

CTS-Ø → U48-11,14 (3C4)

U5-6 (1A5) 38.1KHZ

USART ENABLE-Ø U4-10 (2B6)

A/D READ 1 → U7-9,22 (2B2)

WRITE DISPLAY-Ø → J1-21 DISPLAY ENABLE Ø

U41-13 (2C8)

I/O PORT#1 ENABLE-Ø → U5-8 (1B5)

I/O PORT#2 ENABLE-Ø → U6-8 (3B8)

USART ENABLE-Ø → U44-11 (2C4)

AUX INPUT PORT Ø → U46-1,4,10,13 (1C5)

J1-20 A0-1

J1-16 A1-1

J1-17 A2-1

J1-18 A3-1

(U23-1 SVA/D SOURCE) (1D2)

J7-6 ANALOG SYSTOLIC

J7-8 ANALOG DIASTOLIC

J7-9 ANALOG MAP

J7-10 ANALOG PULSE

PT ZERO CORRECT → R69 (1A7)

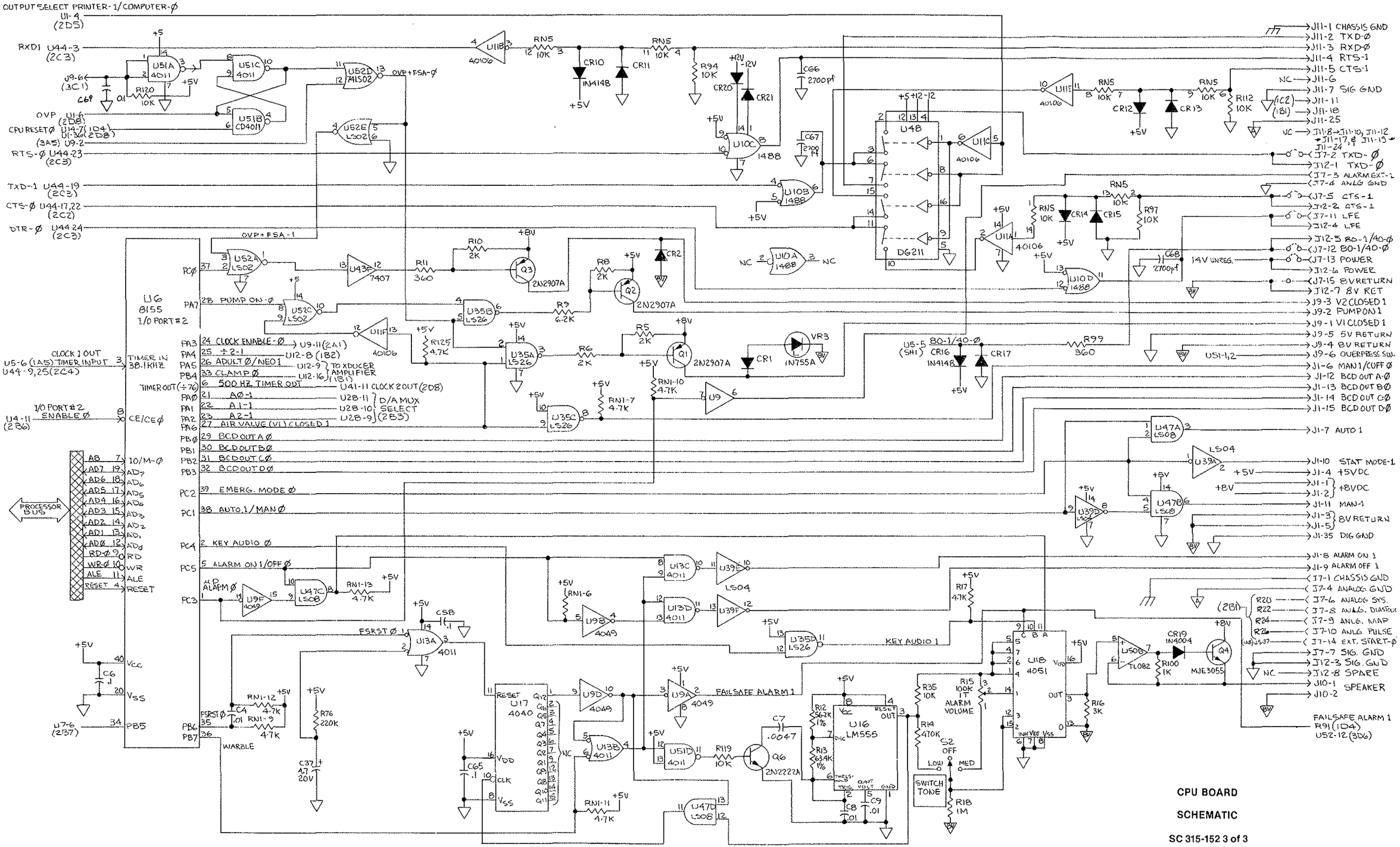
CLOCK ENABLE-Ø → U6-24 (3C7)

(3C7) U6-21 U6-22 U6-23

CPU BOARD

SCHEMATIC

SC 315-152 2 of 3


OUTPUT SELECT PRINTER-1/COMPUTER-Ø
U1-4 (2D5)
RXD1 U44-3 (2C3)
U9-6 (3C1)
C69
R120 10K
OVP U1-6 (2D8)
CPU RESET Ø U14-7 (1D4) U1-36 (2D8)
(3A5) U9-2
RTS-Ø U44-23 (2C3)
TXD-1 U44-19 (2C3)
CTS-Ø U44-17,22 (2C2)
DTR-Ø U44-24 (2C3)
OVP+FSA-Ø
OVP+FSA-1
U6 8155 I/O PORT #2
PA7 28 PUMP ON-Ø
PA3 24 CLOCK ENABLE-Ø → U9-11 (2A1)
PA4 25 ÷2-1 → U12-8 (1B2)
PA5 26 ADULT Ø/NEO 1 → U12-9 TO XDUCER AMPLIFIER (1B1)
PB4 33 CLAMP Ø → U12-16
TIMER OUT (÷76) 6 500 HZ TIMER OUT → U41-11 CLOCK 2 OUT (2D8)
PA0 21 A0-1
PA1 22 A1-1
PA2 23 A2-1
PA6 27 AIR VALVE (VI) CLOSED 1
D/A MUX SELECT (2B3)
PB0 29 BCD OUT A Ø
PB1 30 BCD OUT B Ø
PB2 31 BCD OUT C Ø
PB3 32 BCD OUT D Ø
PC2 39 EMERG. MODE Ø
PC1 38 AUTO 1/MAN Ø
PC4 2 KEY AUDIO Ø
PC5 5 ALARM ON 1/OFF Ø
PC3 ALARM Ø
PB6 35
PB7 26 WARBLE
CLOCK 1 OUT U5-6 (1A5) TIMER INPUT 3 U44-9,25 (2C4)
TIMER IN 38.1KHZ
I/O PORT #2 ENABLE Ø U4-11 (2B6)
CE/CE Ø
PROCESSOR BUS
AB 7 AD7 19 AD6 18 AD5 17 AD4 16 AD3 15 AD2 14 AD1 13 AD Ø 12 RD Ø 9 WR Ø 10 ALE 11 RESET 4
IO/M-Ø AD7 AD6 AD5 AD4 AD3 AD2 AD1 AD Ø RD WR ALE RESET
+5 Vcc 40 C6 .1 Vss 20
U7-6 (2B7) 34 PB5
FSRST Ø 1 C4 .01 RN1-12 4.7K RN1-9 4.7K
R125 4.7K
R76 220K C37 4.7 20V
C58 .1
C65 .1
RN1-6 RN1-7 4.7K RN1-10 4.7K RN1-11 4.7K
R10 2K R11 360 R8 2K R9 6.2K R5 2K R6 2K
CR2 CR1 IN755A VR3
Q1 Q2 Q3 2N2907A
Q6 2N2222A
R119 10K
C7 .0047
U16 LM555
R12 562K 1% R13 634K 1%
C8 .01 C9 .01
R99 360
U5-5 (5H1) 80-1/40-Ø
CR16 IN4148 CR17
R94 10K
CR10 IN4148 CR11
CR20 CR21
C66 2700pf
C67 2700 PF
C68 2700pf
14V UNREG.
RN5 10K
CR12 CR13 CR14 CR15
R112 10K R97 10K
U48 DG211
U11A U11B U11C U11D U11E U11F 40106
U10A U10B U10C U10D 1488
U39A U39B U39C U39D U39E U39F LS04
U47A U47B U47C U47D LS08
U52A U52B U52C U52D U52E LS02
U51A U51B U51C 4011
U35A U35B U35C LS26
U39A U39B U39C U39D U39E U39F LS04
U9A U9B U9C U9D U9E U9F 4049
U13A U13B U13C U13D 4011
U38 4011
U17 4040
U18 4051
U50A TL082
R17 4.7K
R35 10K R14 470K R15 100K 1T ALARM VOLUME R16 3K
S2 OFF LOW MED SWITCH TONE R18 1M
R20 R22 R24 R26 (2B1)
CR19 IN4004 Q4 MJE3055 R100 1K
J11-1 CHASSIS GND
J11-2 TXD-Ø
J11-3 RXD-Ø
J11-4 RTS-1
J11-5 CTS-1
J11-6
J11-7 SIG GND
J11-11 (1C2)
J11-18 (1B1)
J11-25
J11-8 → J11-10, J11-12 → J11-17, 19 → J11-24
J7-2 TXD-Ø → J12-1 TXD-Ø
J7-3 ALARM EXT-1
J7-4 ANLG GND
J7-5 CTS-1 → J12-2 CTS-1
J7-11 LFE → J12-4 LFE
J12-5 80-1/40-Ø → J7-12 80-1/40-Ø
J7-13 POWER → J12-6 POWER
J7-15 8V RETURN → J12-7 8V RET
J9-3 V2 CLOSED 1
J9-2 PUMP ON 1
J9-1 V1 CLOSED 1
J9-5 5V RETURN
J9-4 8V RETURN
U51-1,2 J9-6 OVERPRESS SW.
J1-6 MAN1/CUFF Ø
J1-12 BCD OUT A-Ø
J1-13 BCD OUT B Ø
J1-14 BCD OUT C Ø
J1-15 BCD OUT D Ø
J1-7 AUTO 1
J1-10 STAT MODE-1
J1-4 +5VDC
J1-1, J1-2 +8VDC
J1-11 MAN-1
J1-3, J1-5 8V RETURN
J1-35 DIG GND
J1-8 ALARM ON 1
J1-9 ALARM OFF 1
J7-1 CHASSIS GND
J7-4 ANALOG GND
J7-6 ANALOG SYS.
J7-8 ANLG. DIASTOL
J7-9 ANLG. MAP
J7-10 ANLG PULSE
J7-14 EXT. START-Ø
J7-7 SIG. GND
J12-3 SIG. GND
J12-8 SPARE
J10-1 SPEAKER
J10-2
FAILSAFE ALARM 1
R91 (1D4)
U52-12 (3D6)
KEY AUDIO 1
FAILSAFE ALARM 1

CPU BOARD

SCHEMATIC

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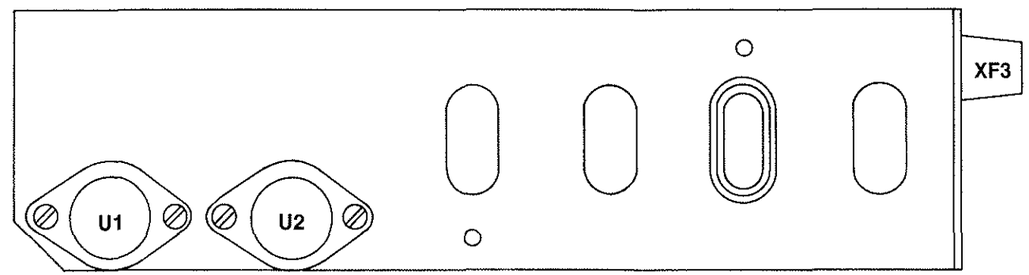
SA9/10



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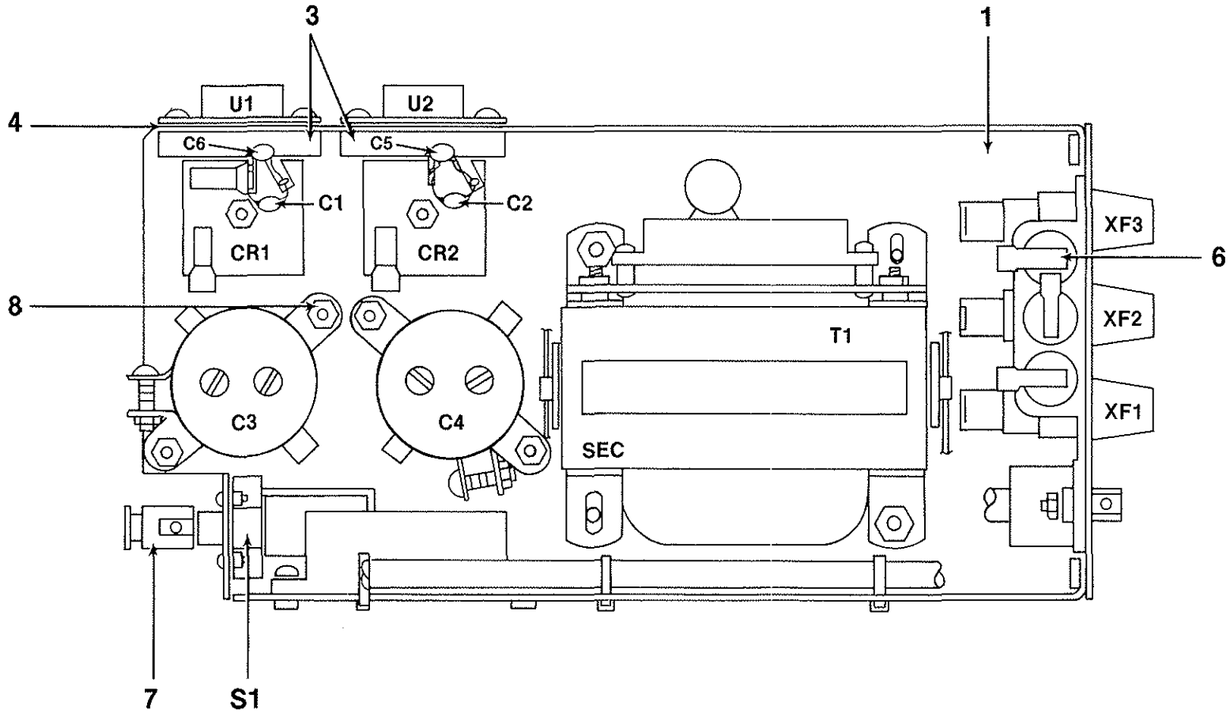
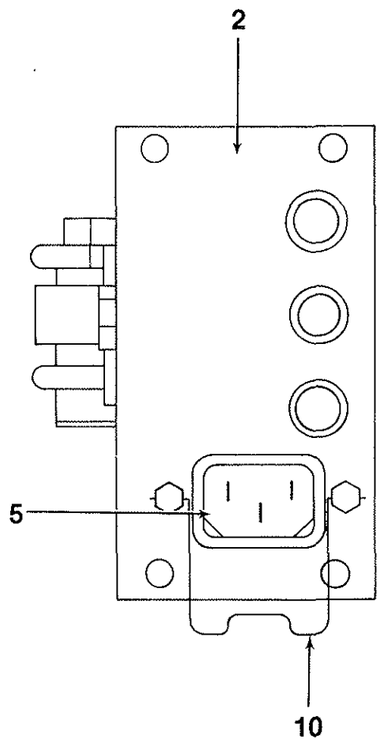
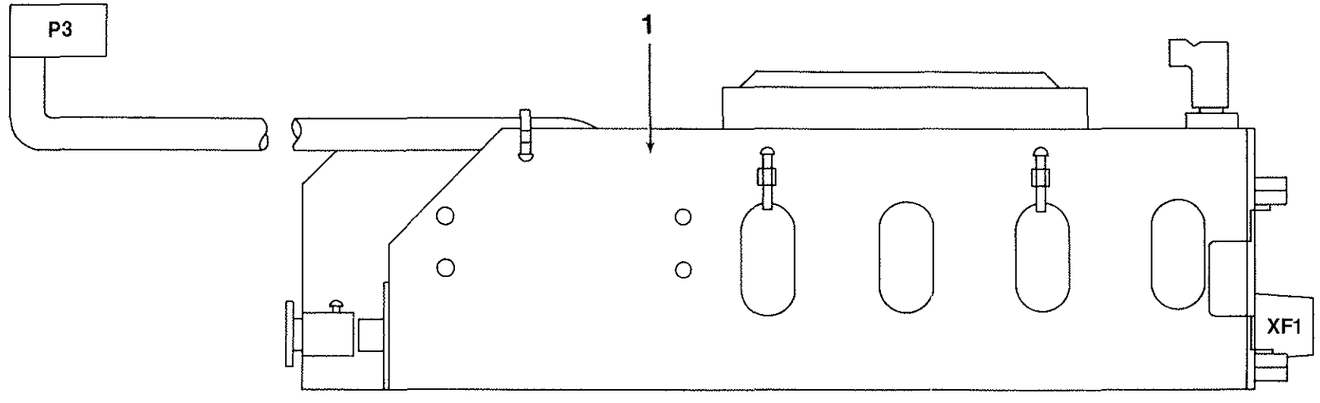
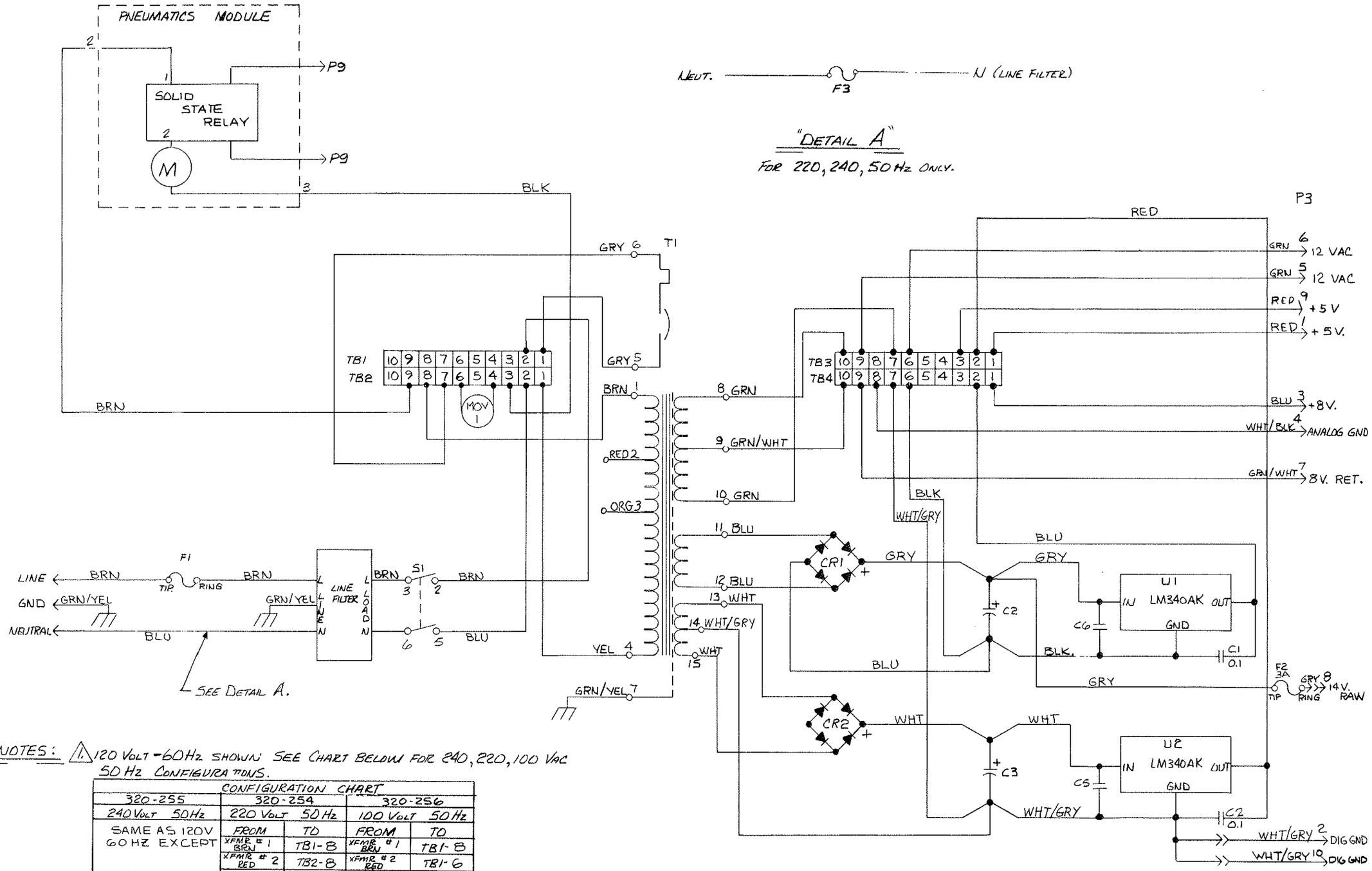






POWER SUPPLY
MODULE



NOTES: ⚠1. 120 VOLT - 60Hz SHOWN. SEE CHART BELOW FOR 240, 220, 100 VAC 50 Hz CONFIGURATIONS.

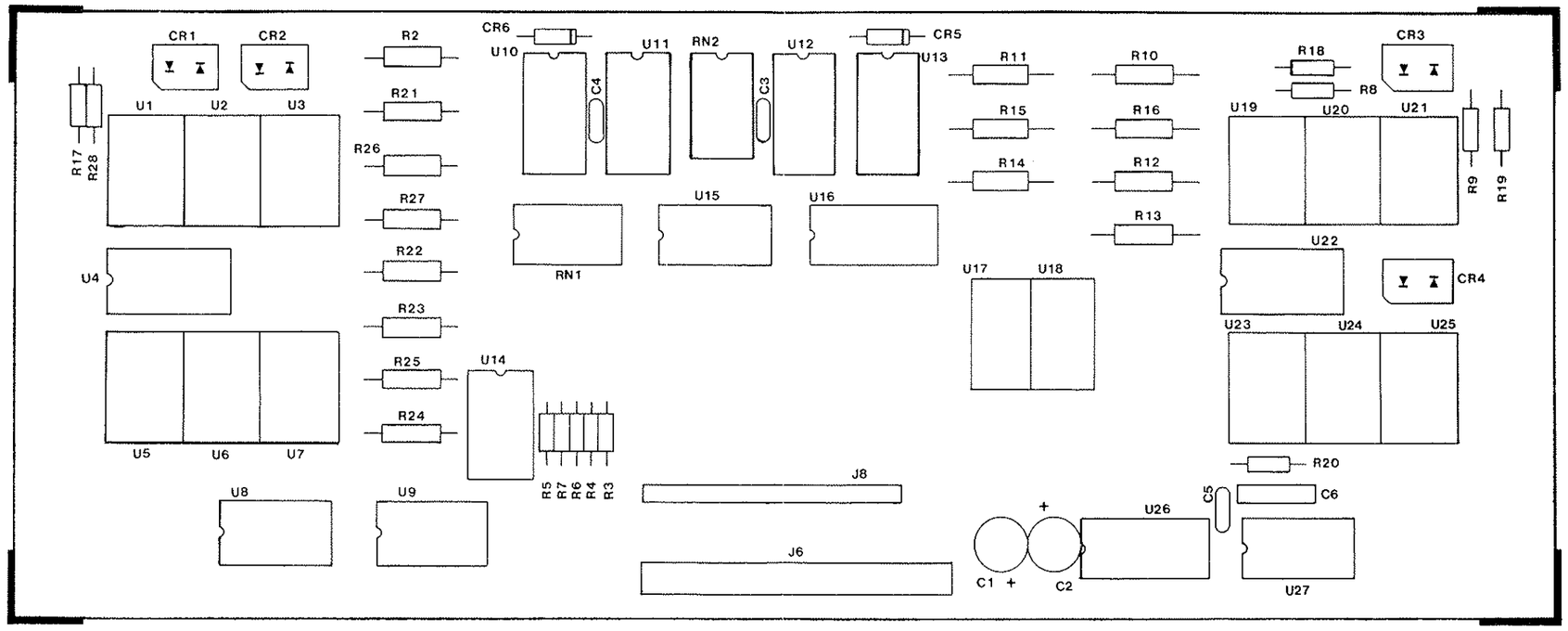
CONFIGURATION CHART

320-255		320-254		320-256	
240 VOLT 50Hz		220 VOLT 50 Hz		100 VOLT 50 Hz	
SAME AS 120V 60 HZ EXCEPT		FROM	TO	FROM	TO
		XFMR # 1 BRN	TB1-8	XFMR # 1 BRN	TB1-8
		XFMR # 2 RED	TB2-8	XFMR # 2 RED	TB1-6
FROM	TO	XFMR # 3 ORG.	TB1-6	XFMR # 3 ORG.	TB2-8
XF#2	TB1-8	XFMR # 4 YEL	TB2-1	XFMR # 4 YEL.	TB2-1
XF#3	TB1-6	SSR1	TB1-9	SSR1	TB1-9

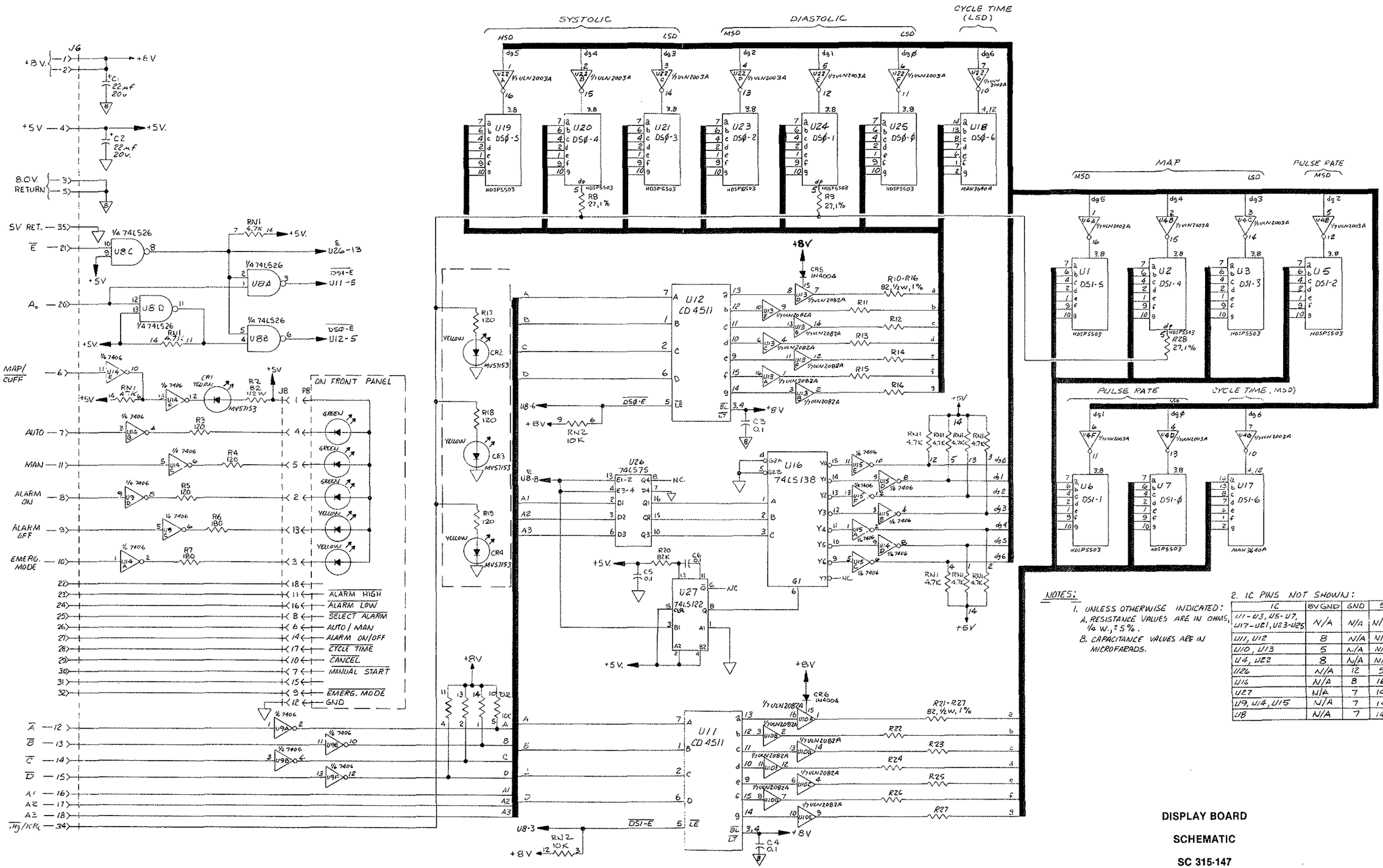
POWER SUPPLY

SCHEMATIC

SC 320-185



DISPLAY BOARD

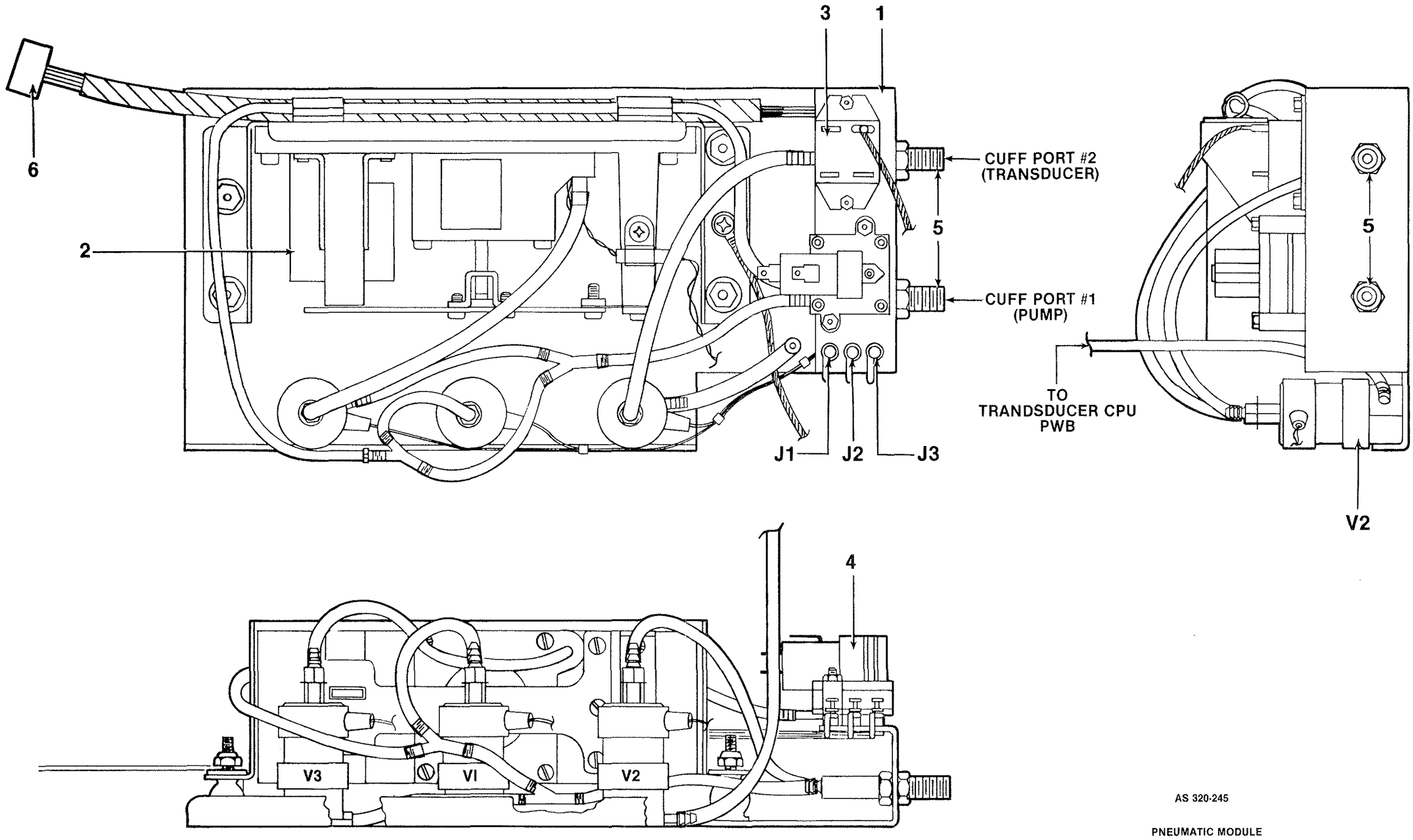

SYSTOLIC
DIASTOLIC
CYCLE TIME (LSD)
MAP
PULSE RATE
+8V
+5V
ON FRONT PANEL
ALARM HIGH
ALARM LOW
SELECT ALARM
AUTO / MAN
ALARM ON/OFF
CYCLE TIME
CANCEL
MANUAL START
EMERG. MODE
GND
NOTES:
1. UNLESS OTHERWISE INDICATED:
A. RESISTANCE VALUES ARE IN OHMS, 1/4 W., ±5%.
B. CAPACITANCE VALUES ARE IN MICROFARADS.
2. IC PINS NOT SHOWN:
IC | 8V GND | GND | 5V | 8V
U1-U3, U5-U7, U17-U21, U23-U25 | N/A | N/A | N/A | N/A
U11, U12 | 8 | N/A | N/A | 16
U10, U13 | 5 | N/A | N/A | N/A
U4, U22 | 8 | N/A | N/A | N/A
U26 | N/A | 12 | 5 | N/A
U16 | N/A | 8 | 16 | N/A
U27 | N/A | 7 | 14 | N/A
U9, U14, U15 | N/A | 7 | 14 | N/A
U8 | N/A | 7 | 14 | N/A

DISPLAY BOARD

SCHEMATIC

SC 315-147

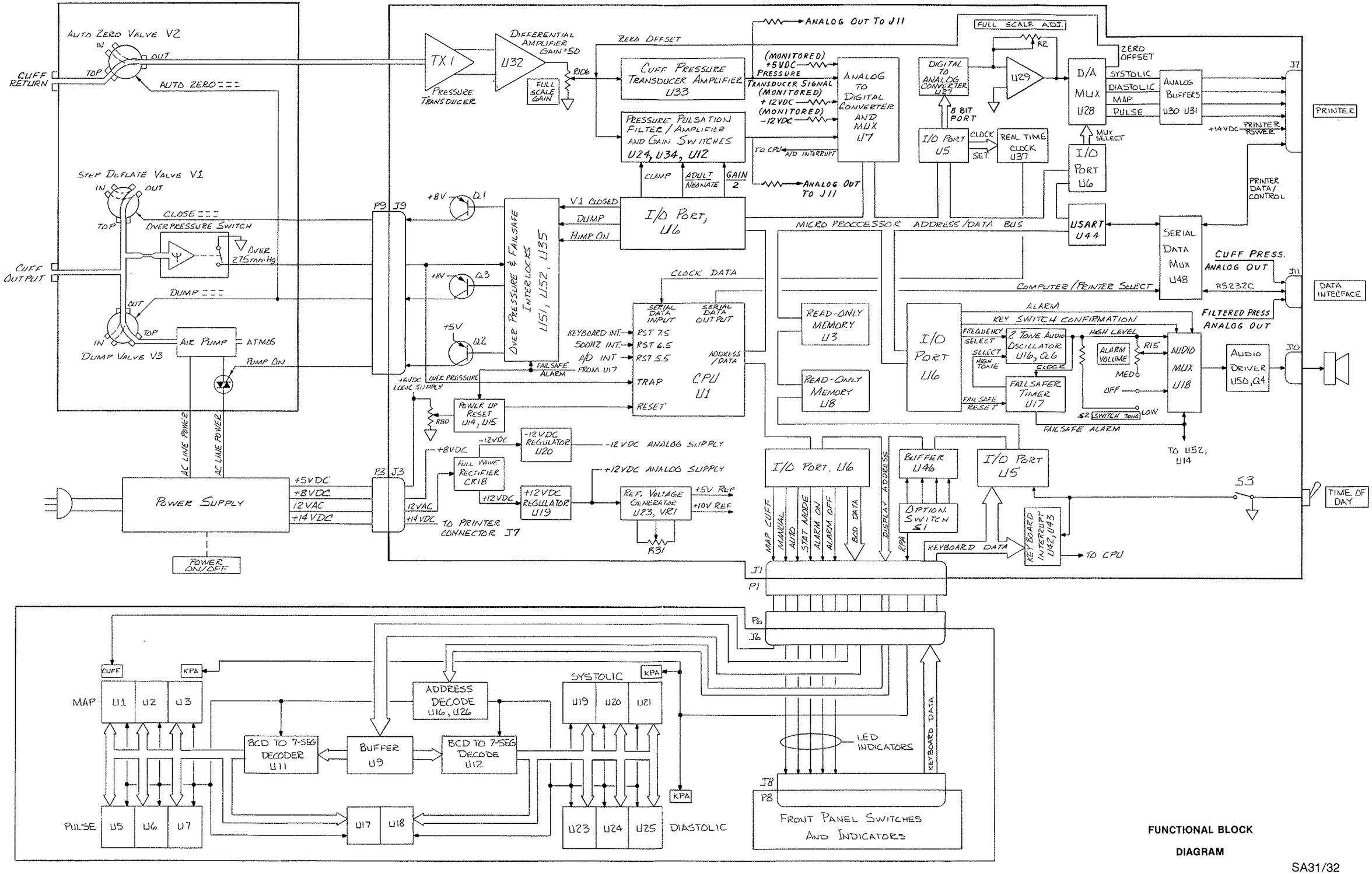
SA23/24



AS 320-245

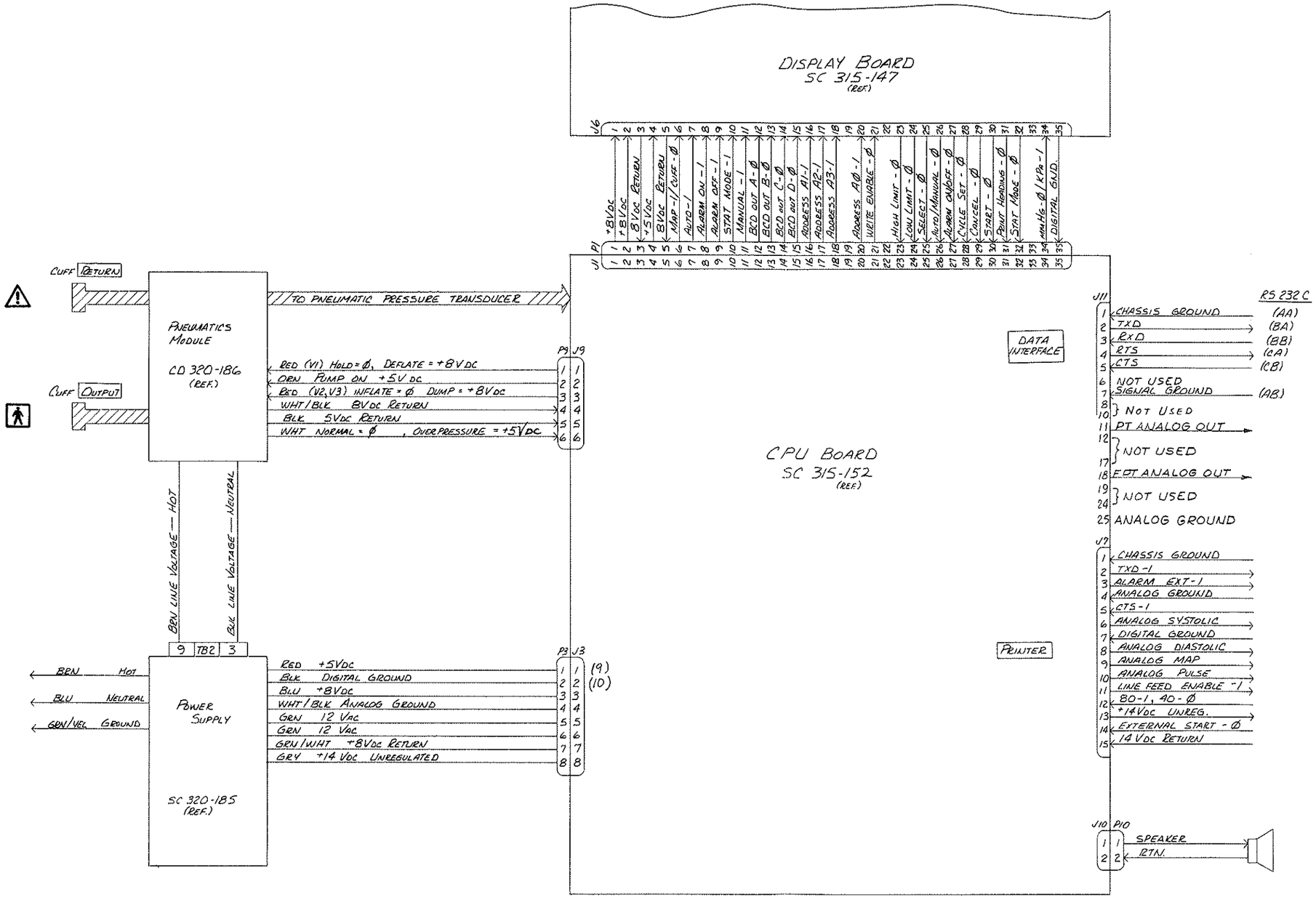
PNEUMATIC MODULE

MODEL 200



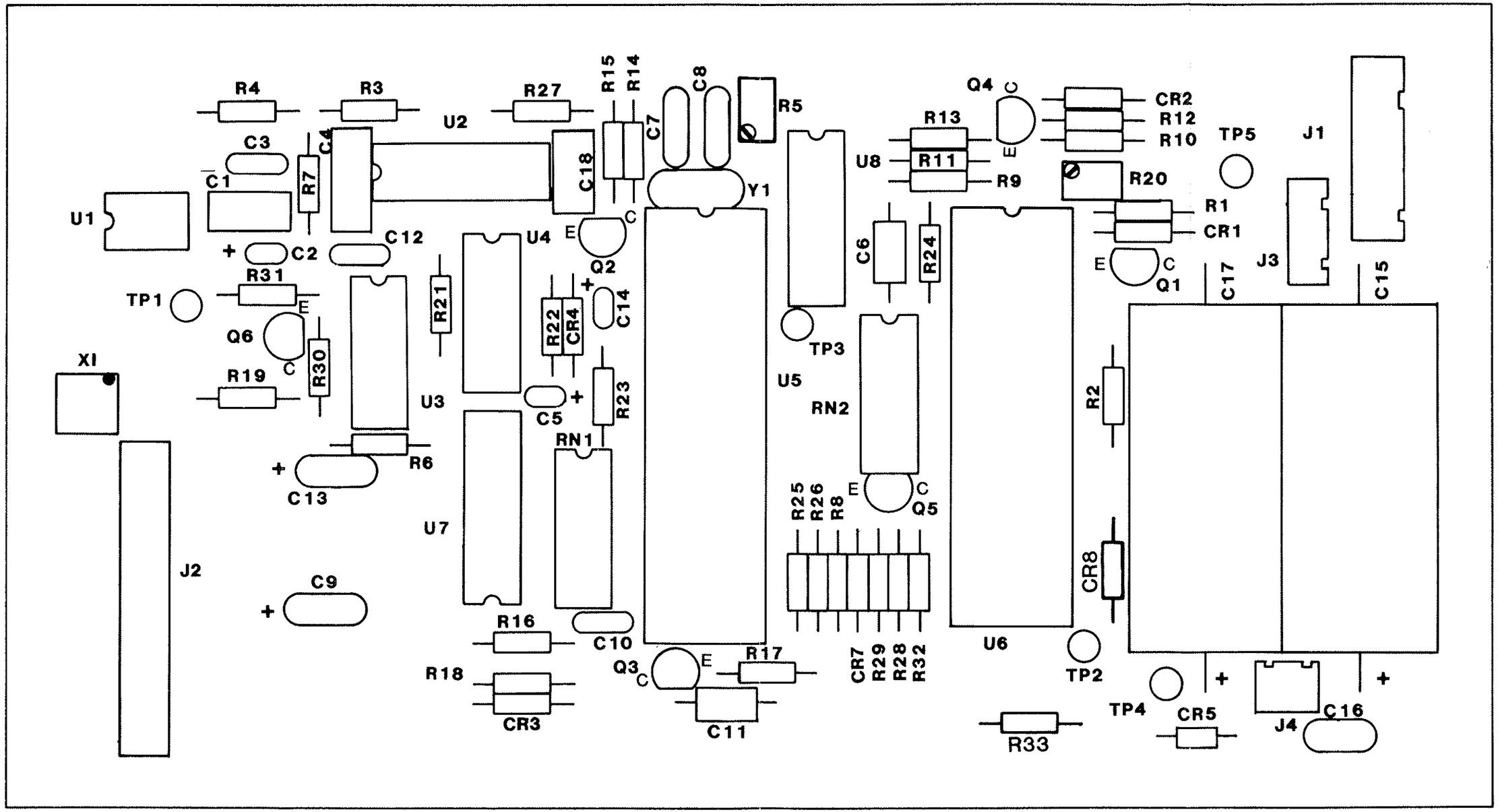
FUNCTIONAL BLOCK DIAGRAM

SA31/32



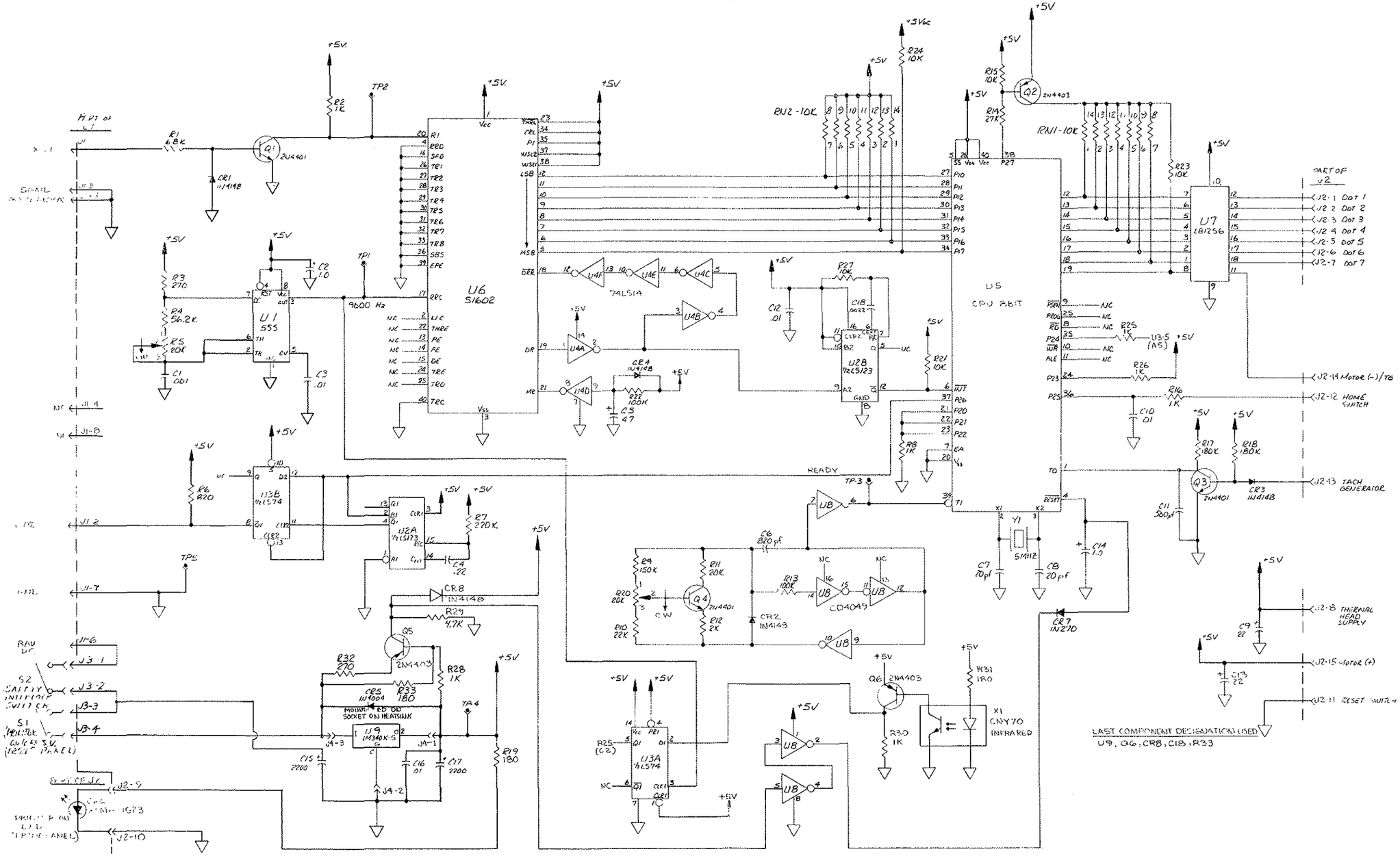
CONNECTION DIAGRAM

CD 354-250

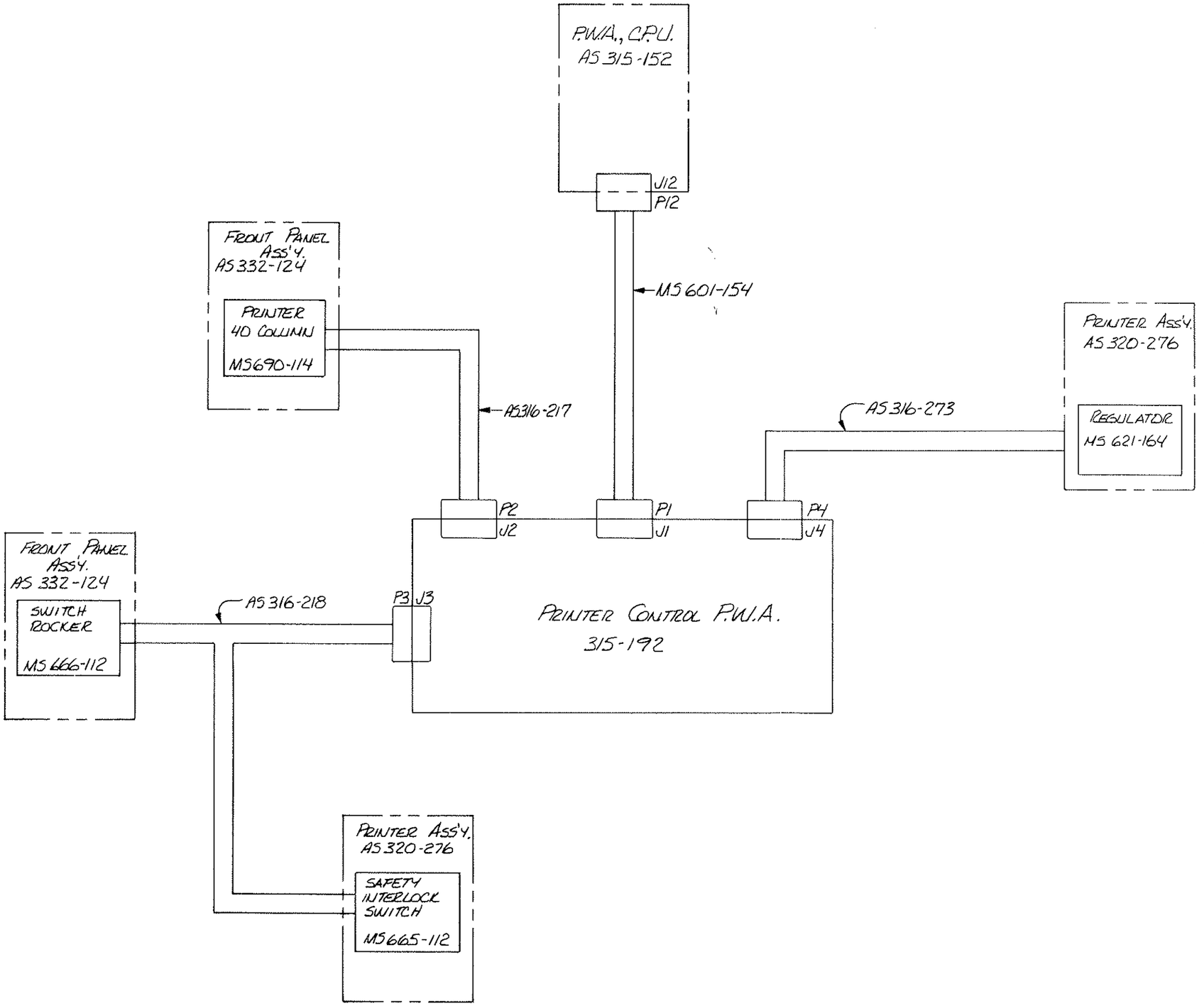


MODEL 1846P
PRINTER CONTROL BOARD

NOTES:
1. UNLESS OTHERWISE SPECIFIED:
RESISTOR VALUES ARE IN OHMS, 1/4 W, 5%
CAPACITOR VALUES ARE IN MICROFARADS.



MODEL 1846P
PRINTER CONTROL BOARD
SCHEMATIC

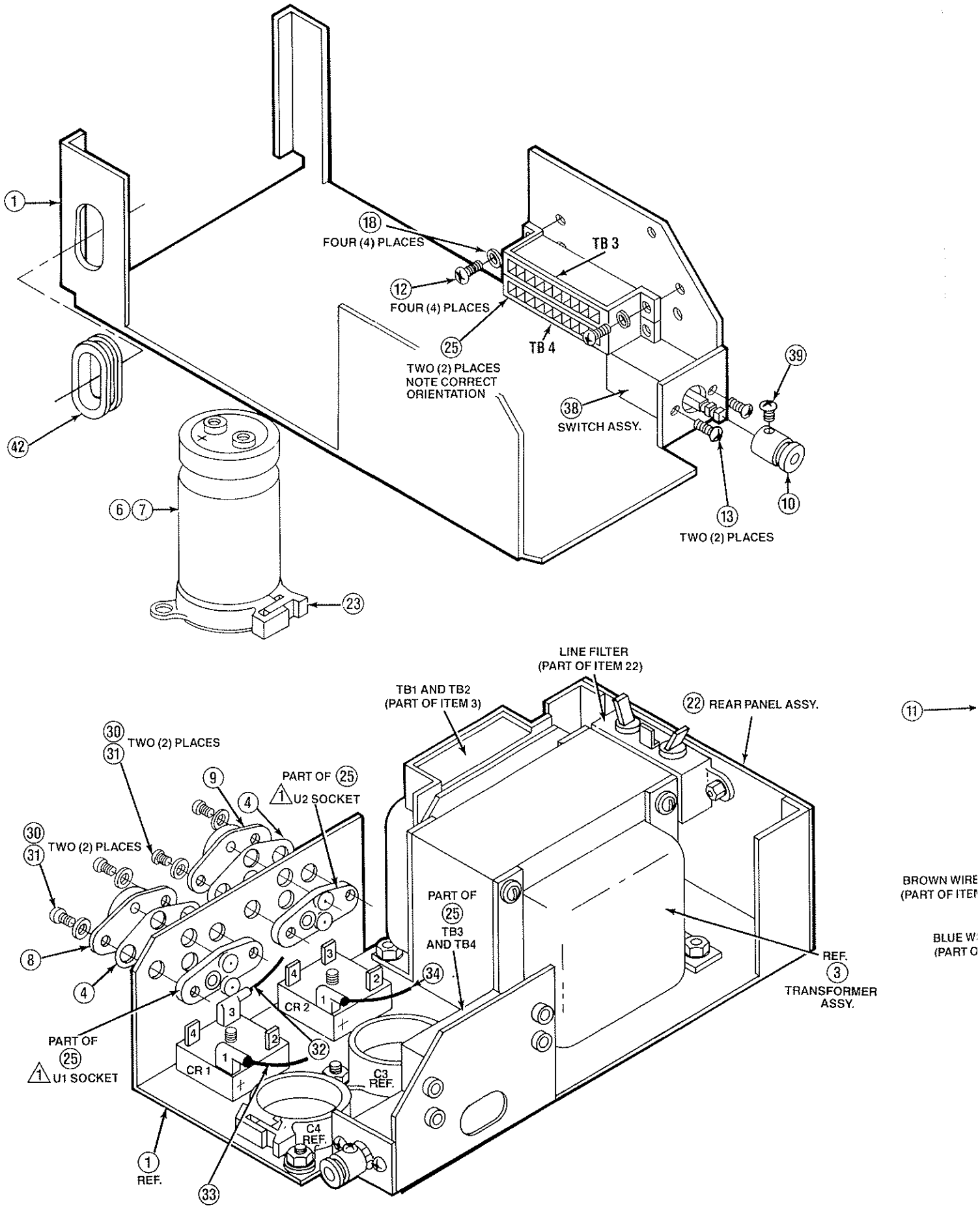


MODEL 1846P
PRINTER CONTROL BOARD
CONNECTION DIAGRAM

PARTS LIST, MODEL 1846 SX and MODEL 1846 SX/P POWER SUPPLY MODULE, REFERENCE ASSEMBLIES:

320-388	120Vac/60Hz
320-187	240Vac/50Hz
320-386	220Vac/50Hz
320-390	100Vac/50Hz

REF. DES.	COMP (NO.)	DESCRIPTION	PART NUMBER
	(1)	Chassis, power supply 1846 SX-SX/P	702-158
T1	(3)	Transformer Assy, 120 Vac/60 Hz	320-339
		Transformer Assy, 100 Vac/50 Hz	320-335
		Transformer Assy, 220/240 Vac/50 Hz	320-257
	(4)	Insulator, Transistor (T0-3) polyimide	752-148
CR1, 2	(5)	Rectifier Assy, 10 A 100 V	647-106
C4	(6)	Capacitor, elctlt 7200 µF 25 Vdc	604-131
C3	(7)	Capacitor, elctlt 13,000 µF 15 Vdc	604-129
U1	(8)	IC, 340-8 lin +8 V reg 1 A	621-165
U2	(9)	IC, 340-5 lin +5 V reg 1.5 A	621-164
	(10)	Fitting, power switch	704-399
	(11)	Screw, 4-40 x 1/4 flat phh	719-240
HARDWARE	(12)	Screw, 4-40 x 5/16 pnhd phh sst	719-106
	(13)	Screw, slftpg 1/4 pnhd	722-113
	(15)	Washer, flat #4 sst	723-102
	(16)	Washer, flat #8 sst	723-104
	(18)	Washer, lock split #4 sst	724-101
	(19)	Washer, lock split #8 sst	724-103
	(21)	Nut, hex #8 sst	715-109
	(23)	Clamp, ring capacitor mount	736-141
	(24)	Nut, hex #4 sst	715-107
	(25)	Cable Assy, pwr supply	316-290
	(30)	Screw, 6-32 x 9/16 lg pnhd xcess	719-123
	(31)	Washer, lock split #6 sst	724-102
	(32)	Cable Assy	316-175
	(33)	Cable Assy	316-176
	(34)	Cable Assy	316-177
S1	(38)	Switch, cable assembly mains power (dom)	316-206
		Switch only (int'l)	665-113
	(39)	Screw, 4-40 x 3/16 pnhd phh sst	719-101
	(40)	Screw, 10-32 x 3/8 pnhd phh sst	719-113
	(41)	Washer, lock fl-int tooth #10	724-109
	(42)	Grommet, continuous flexible	752-167
P2	(44)	Power Cable Assy	316-295



NOTE: C3/C4 NOT SHOWN FOR CLARITY

1 U1 HAS BLUE WIRE
U2 HAS THREE (3) WHITE/GRAY WIRES.

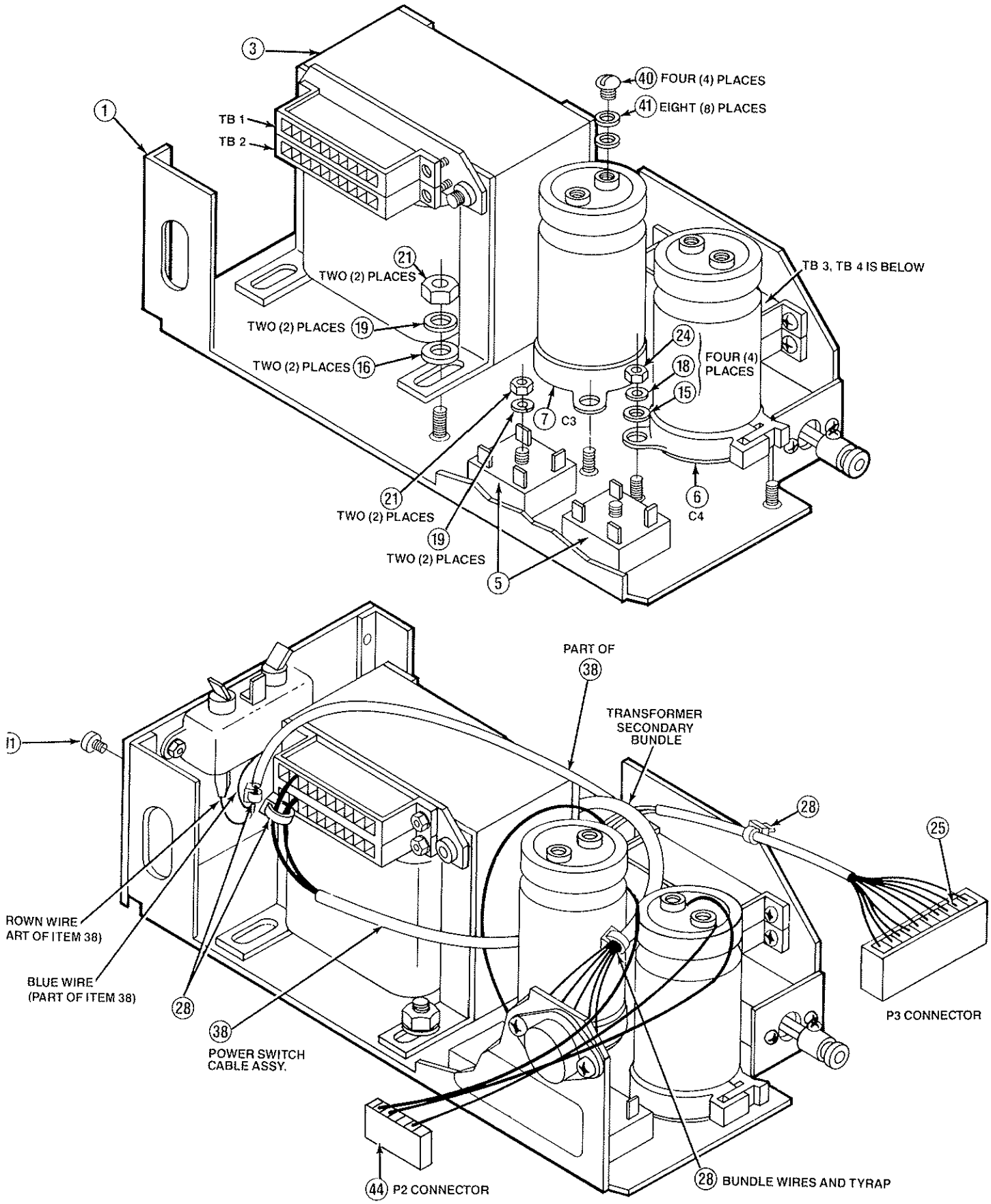


Figure 6-4.
Illustrated Parts Breakdown
Power Supply Module

NOTES: ⚠1. 120 VOLT - 60 Hz SHOWN; SEE CHART BELOW FOR 240, 220, 100 VAC 50 Hz CONFIGURATIONS.

CONFIGURATION CHART

320-255		320-254		320-256	
240 VOLT 50 Hz		220 VOLT 50 Hz		100 VOLT 50 Hz	
SAME AS 120V 60 HZ EXCEPT		FROM	TO	FROM	TO
		XFMR # 1 GRN	TB1-8	XFMR # 1 BRN	TB1-8
		XFMR # 2 RED	TB2-8	XFMR # 2 RED	TB1-6
FROM	TO	XFMR # 3 ORG	TB1-6	XFMR # 3 ORG	TB2-8
XF#2	TB1-8	XFMR # 4 YEL	TB2-1	XFMR # 4 YEL	TB2-1
XF#3	TB1-6				

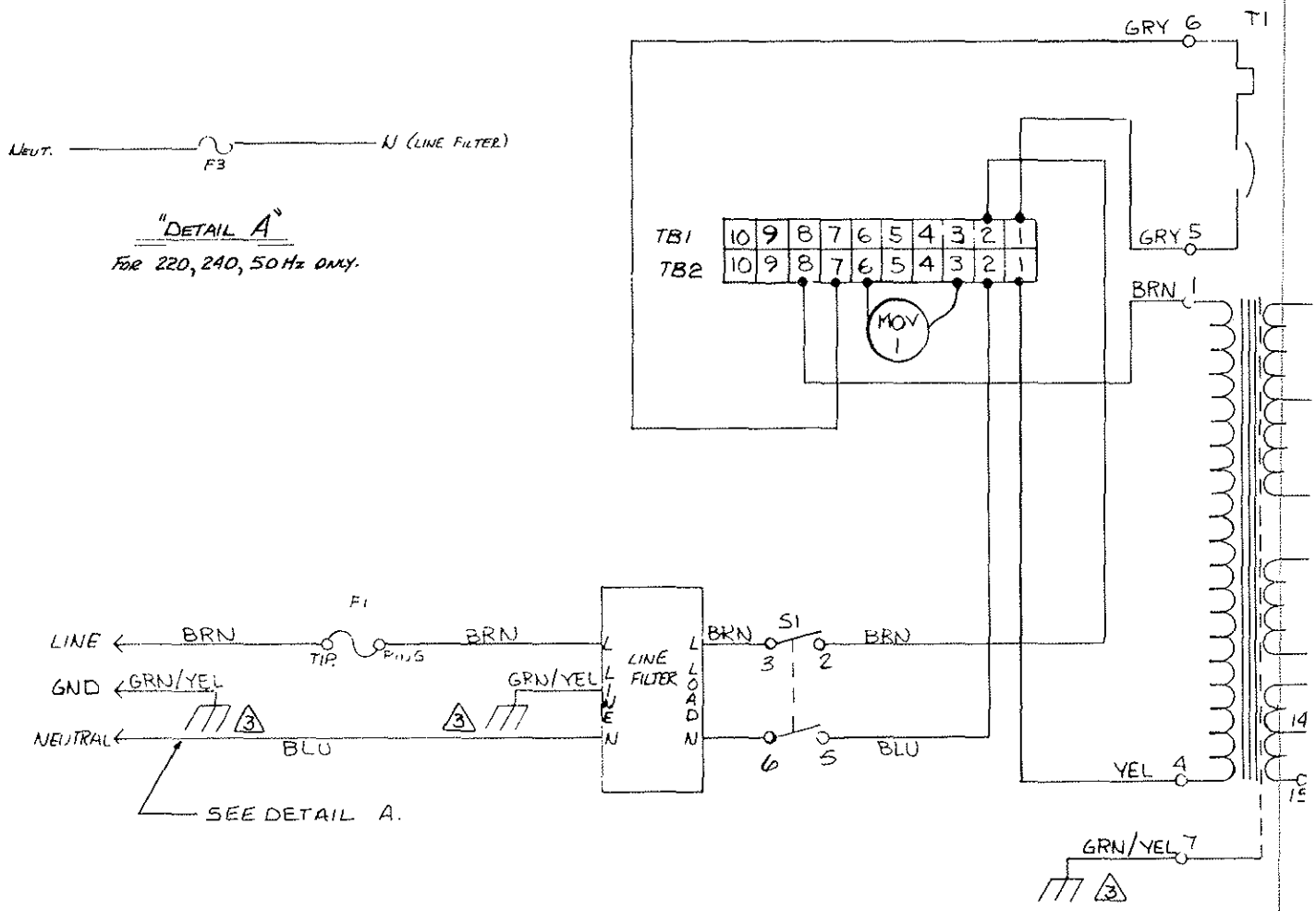
2. NOTE 2 DELETED

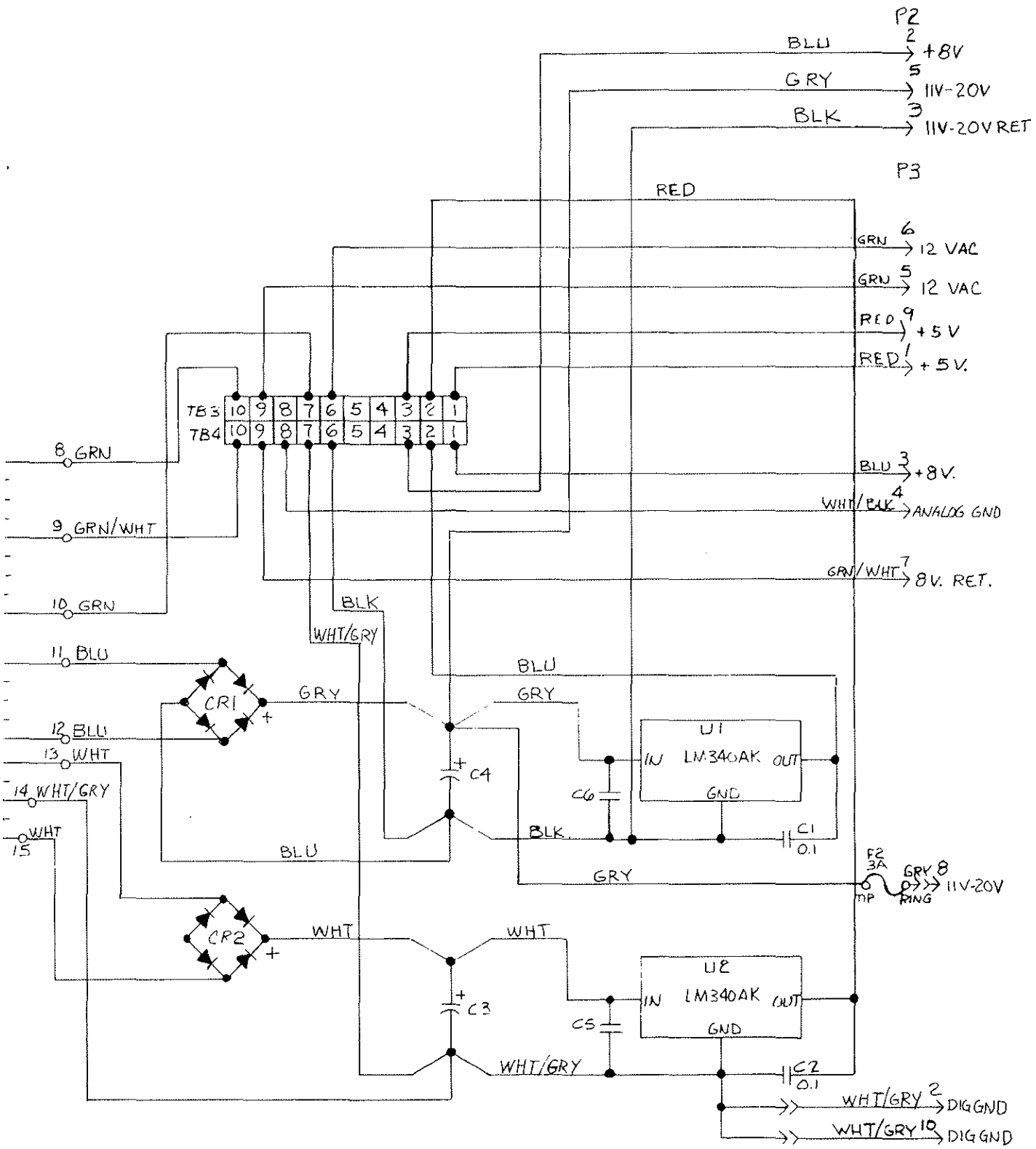
⚠3 CHASSIS GROUNDS (3) CARRIED EXTERNALLY TO GROUND STUDS ON MAIN CHASSIS.

⚠4 PARTS LIST FOR THESE TWO CONFIGURATIONS ARE IDENTICAL TO 320-255. PART NUMBER CONFIGURATION IS DUE TO THE WIRE HOOK-UP OF COMMONING BLOCK SHOWN IN NOTE 1.

⚠5 ITEMS 28, 29 USED ONLY ON ASS'Y. 320-255, 320-254 & 320-256

⚠6 THIS ROUTING FOR CONFIGS. 320-255, 320-254 & 320-256 ONLY.





Power Supply Module
Schematic, SC320-388

CPU BOARD 1846

REF DES	DESCRIPTION	PART NUMBER
U1	IC, 8085 MICROPROCESSOR 8-BIT	623-106
U5, 6	IC, 8155 RAM WITH TIMER 256X8	622-110
U7	IC, 0808 CMOS 8-BIT A/D-MUX	619-132
U27	IC, 1408 LIN 8-BIT D/A	621-129
U44	IC, 8251 USART PROGRAMMABLE	623-107
U12, 48	IC, 211 CMOS QUAD SWITCH	619-128
U37	IC, 1990 CMOS CALENDAR & CLOCK	619-133
U16	IC, 555 LIN TIMER	621-117
U39	IC, 74LS32DGTL HEX INVERTER	620-135
U45	IC, 74LS32DGTL OR GATE 2-INPUT	620-138
U41	IC, 74LS74DGTL "D" FLIP-FLOP	620-130
U47	IC, 74LS08DGTL AND GATE 2-INPUT	620-103
U4	IC, 74LS138DGTL 10F8 DCDR/DEMUX	620-127
U2	IC, 74LS373DGTL 8-BIT LATCH	620-128
U35	IC, 74LS 26DGTL NAND BFR 2-INPUT	620-136
U42, 43	IC, 7407 DGTL HEX BUFFER/DRVR	620-116
U46	IC, 74LS125ADGTL 3-STATE BFR	620-139
U13, 51	IC, 4011 CMOS 4 2-INPUT NAND	619-106
U17	IC, 4040 CMOS 12-BIT BIN CNTR	619-110
U9	IC, 4049U CMOS INVERTER	619-111
U28, 18	IC, 4051 CMOS 8-CHAN MUX/DEMUX	619-113
U11	IC, 40106 CMOS SCHMITT TRIGGER	619-127
U10	IC, 1488 DGTL QUAD LINE DRIVER	620-101
U14	IC, 4574 CMOS QUAD COMPARATOR	619-130
U15	IC, 40175 CMOS QUAD D FLIP-FLOP	619-129
U32	IC, 725C LIN INSTM OP-AMP	621-122
U19	IC, 340A12 LIN POS 12V REG 1.5A	621-172
U20	IC, 7912 LIN NEG 12V REG 1.5A	621-173
U23, 24, 29, 30, 31, 33, 34, 50	IC, 082 LIN J-FET OP-AMP DUAL	621-125
U52	IC, 74LS02DGTL NOR GATE 2-INPUT	620-129
Q1, 2, 3	XSTR, SW PNP 2N2907A	674-404
Q4	XSTR, PWR AMPL, NPN MJE3055	673-103
Q5, 6	XSTR, SW NPN 2N2222A	674-403
VR1, 2	DIO, 1.2V VOLTAGE REF	611-105
VR3	DIO, ZENER 7.5V 5% 0.4W IN755A	612-102
CR1-CR17	DIO, SW 200MA 75V 4PF IN 4148	610-104
CR18	RECTIFIER, ASSY 1AMP 200V	647-105
CR19, 20, 21	DIO, RECT 1AMP 400V IN4004	610-103
Y1	CRYSTAL, 3.57945 MHZ 0.015%	609-104
Y2	CRYSTAL, 32.768 KHZ	609-105
TX1	TRANSDUCER, PRESSURE	See Note 1

CPU BOARD 1846 (continued)

REF DES	DESCRIPTION	PART NUMBER
RN1, 2, 4	RES, NETWORK 4.7-13 KOHM 2%	656-104
RN3	RES, NETWORK 7-33 KOHM 2%	656-105
RN5	RES, NETWORK 7-10 KOHM 2%	656-107
R44	RES, CF 33 OHM 5% 1/4W	650-149
R11, 99, 118	RES, CF 360 OHM 5% 1/4W	650-151
R19, 21,23, 25, 28, 60, 61, 69, 100, 104, 105, 113, 114, 117	RES, CF 1 KOHM 5% 1/4W	650-102
R84	RES, CF 2.2 MOHM 5% 1/4W	650-133
R5, 6, 8, 10	RES, CF 2 KOHM 5% 1/4W	650-126
R16	RES, CF 3 KOHM 5% 1/4W	650-143
R1, 17, 125	RES, CF 4.7 KOHM 5% 1/4W	650-157
R14	RES, CF 470 KOHM 5% 1/4W	650-159
R9	RES, CF 6.2 KOHM 5% 1/4W	650-171
R20, 22, 24, 26, 35, 57, 58, 82, 88-91, 94, 97, 112, 119, 120, 126, 127	RES, CF 10 KOHM 5% 1/4W	650-103
R79	RES, CF 20 KOHM 5% 1/4W	650-127
R27	RES, CF 22 KOHM 5% 1/4W	650-131
R7	RES, CF 33 KOHM 5% 1/4W	650-146
R87	RES, CF 39 KOHM 5% 1/4W	650-153
R81, 85	RES, CF 100 KOHM 5% 1/4W	650-104
R83	RES, CF 150 KOHM 5% 1/4W	650-119
R86	RES, CF 200 KOHM 5% 1/4W	650-190
R76	RES, CF 220 KOHM 5% 1/4W	650-132
R18, 29	RES, CF 1 MOHM 5% 1/4W	650-105
R115	RES, CF 680 OHM 5% 1/2W	651-113
R107-110	RES, CF 1.2 KOHM 5% 1/4W	650-111
R34, 46	RES, MF 4.99 KOHM 1% 1/8W	652-159
R40, 47	RES, MF 100 OHM 1% 1/8W	652-211
R49	RES, MF 499 OHM 1% 1/8W	652-158
R54	RES, MF 110 KOHM 1% 1/8W	652-108
R59	RES, MF 30.1 KOHM 1% 1/8W	See Note 1
R3, 4	RES, MF 2.49 KOHM 1% 1/8W	652-138
R48	RES, MF 8.25 KOHM 1% 1/8W	652-171
R30, 62, 70, 71, 73, 75	RES, MF 10.2 KOHM 1% 1/8W	652-106
R65	RES, MF 24.9 KOHM 1% 1/8W	652-139
R55, 64, 121	RES, MF 23.7 KOHM 1% 1/8W	652-135
R36, 37, 72, 74	RES, MF 33.2 KOHM 1% 1/8W	652-150
R32	RES, MF 3.01 KOHM 1% 1/8W	652-145
R12	RES, MF 56.2 KOHM 1% 1/8W	652-162

CPU BOARD 1846 (continued)

REF DES	DESCRIPTION	PART NUMBER
R13	RES, MF 63.4 KOHM 1% 1/8W	652-164
R33, 42, 63, 67, 122-124	RES, MF 75.0 KOHM 1% 1/8W	652-168
R52, 53	RES, MF 330 KOHM 1% 1/8W	652-207
R50, 51	RES, MF 221 KOHM 1% 1/8W	652-182
R116	RES, MF 1.15 KOHM 1% 1/8W	652-222
R43	RES, MF 287 OHM 1% 1/8W	See Note 1
R56	RES, MF 1.33 KOHM 1% 1/8W	652-221
R38, 39, 41, 45	RES, MF 75 KOHM 0.1% 1/8W	652-203
R2	POT 1 KOHM 10% 1/2W 20 TURN	630-122
R15	POT 100 KOHM 10% 1/2W	630-149
R31, 106	POT 10 KOHM 10% 3/4W 20 TURN	630-109
R80	POT 20 KOHM 10% 1/2W 12 TURN	630-135
R98	THMS, POSITIVE TEMP 5 KOHMS	See Note 1
C17	CAP, FIXED CERAMIC DISK	602-408
C18, 19, 43, 44	CAP, MICA 20 PF 100V 5%	602-114
C3	CAP, CER 39PF 50V 10% AXIAL	602-128
C7	CAP, CERAMIC 0.0047UF 50V 5%	602-131
C4, 9, 49, 50	CAP, CERAMIC 0.01UF 50V 20%	602-119
C1, 2, 5, 6, 15, 21, 29, 30-32, 34, 36, 40, 45, 46, 51-59, 61-65, 69	CAP, CERAMIC 0.1UF 50V 20%	602-106
C23, 24, 42	CAP, POLYESTER 0.1UF 100V 5%	603-113
C25, 26	CAP, POLYESTER 1UF 100V 5%	603-114
C14, 20, 37	CAP, TANTALUM 4.7UF 20V 20%	603-105
C33, 35	CAP, TANTALUM 22UF 20V 20%	603-104
C41	CAP, TANTALUM 47UF 10V 10%	603-156
C47, 48	CAP, ELCTLT 500UF 30VDC	604-130
C8	CAP, POLYESTER 0.01UF 100V 5%	603-109
C22	CAP, POLYESTER 0.047UF 100V 5%	603-125
C60	CAP, TANTALUM 10UF 20V 20%	603-102
C66-68	CAP, CERAMIC 0.0027UF 50V 10%	602-174
C10-13	CAP, CERAMIC 1UF 50V 20%	602-175
J1	CONN, 40 POSN, RTANG, LOCK & EJECT	607-275
J7	CONN, 15 CONT PLUG D-SUBMIN	607-273
J11	CONN, 25 CONT PLUG D-SUBMIN	607-234
J10	CONN, 2 PIN HEADER RIGHT ANGLE	607-237
J12	CONN, HEADER 8 POSN RT ANGLE	607-303
J3	HEADER ASSY, 0.045SQ PIN 10 POSN	608-174
J9	HEADER ASSY, 0.025SQ PIN 6 POSN	608-149

CPU BOARD 1846 (continued)

REF DES	DESCRIPTION	PART NUMBER
XU2	SOCKET, DIP LO-PROFILE 20 PIN	607-232
XU3, 7, 8, 44	SOCKET, DIP LO-PROFILE 28 PIN	607-169
XU1, 5, 6	SOCKET, DIP LO-PROFILE 40 PIN	607-170
S1	SW, 4 POSN DIP TOP ACTUATED	666-108
S2	SW, TOGGLE SPDT 0.4VA @ 20VDC	664-128
S3	SW, TOGGLE SPDT 0.4VA @ 20VDC	664-131
B1	BATTERY, AA CELL LITHIUM 3.4V	633-111
TP1-30	TERMINAL, TUBULAR, FOR 0.094 BRD	734-103
HARDWARE	SOCKET, SOLDER-MOUNT SINGLE-PIN	607-301
	CONTACT PIN 0.025SQ POST	608-138
	CONNECTOR, SHORTING JUMPER	607-297
	GROUND STRAP, CPU BOARD	316-185
	GROMMET, NYLATCH* 1/4 DIA BLK	752-160
	PLUNGER, NYLATCH* MINI HEAD BLK	752-159
	CLIP, AA-BATTERY HOLDER	736-140
	TYRAP, NYLON 1.250 BDL DIA MAX	756-105
	JACK SCREW 3/16 HEX	722-110
	SCREW, 2-56 × 1/4 PAN HD PHH SST	719-208
	SCREW, 2-56 × 3/8 PAN HD PHH SST	719-207
	SCREW, 4-40 × 3/8 PAN HD PHH SST	719-110
	SCREW, 6-32 × 3/8 PAN HD PHH SST	719-111
	WASHER, SHOULDER NYLON	725-110
	WASHER, LOCK SPLIT #2 SST	724-105
	WASHER, FLAT #2 SST	723-101
	WASHER, FLAT SMALL PATTERN #6	723-107
	WASHER, LOCK FL-INT TOOTH #6 SST	724-107
	WASHER, FLAT NYLON #4	725-109
	WASHER, LOCK SPLIT #4 SST	724-101
	SPACER, RD NYL. 085, .028, .130L	735-153
	NUT, HEX #2 SST	715-101
	NUT, HEX #6 SST	715-108
	TAPE, FOAM DBL ADHV 1/16 × 1.00	774-104
	NOTE 1 MUST BE INSTALLED BY CRITIKON FIELD ENGINEERING.	

* Trademark HARTWELL Corporation

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POWER SUPPLY MODULE 1846

REF DES	DESCRIPTION	PART NUMBER
U1	IC, 340-8 LIN +8V REG 1A	621-165
U2	IC, 340-5 LIN +5V REG 1.5A	621-164
CR1, 2	RECTIFIER, ASSY 10AMP 100V	647-106
C1, C2	CAP, CERAMIC 0.1UF 50V 20%	602-106
C3	CAP, ELCTLT 13,000 UF 15VDC	604-129
C4	CAP, ELCTLT 7200 UF 25VDC	604-131
C5, C6	CAP, CERAMIC 0.22UF 50V 20%	602-118
T1	XFORMER PREP	320-206
XF1-XF3	FUSEHOLDER, IEC TYPE W/O CAP	617-104
	CAP, FUSEHOLDER GREY	752-108
F1	FUSE, 1.5AMP 250V SLO-BLO	628-106
F2	FUSE, 3AMP 250V SLO-BLO	628-105
S1	MAINS POWER SWITCH ASSEMBLY	316-206
P3	P3 CONN PREP 1846 PWR SUPPLY	316-290
1	CHASSIS POWER SUPPLY 1846	702-133
2	COVER, REAR POWER SUPPLY	703-151
3	SOCKET, TRANSISTOR (TO-3)	607-212
4	INSULATOR, TRANSISTOR (TO-3) POLYIMIDE	752-148
5	CONN, AC RCPT RECESSED PNL MNT	607-259
6	FILTER,LINE 6A 250V 0.15-20MHZ	618-103
7	FITTING, POWER SWITCH	704-399
8	CLAMP RING CAP MOUNT	736-136
9	GROMMET,CONTINUOUS, FLEXIBLE	752-167
10	CLIP, RETAINING LINE CORD	736-138
HARDWARE	BRKT, CONN MTG	704-252
	CONN, HOUSING, 10 POSN COMMONING	607-282
	PLUG, CONN KEYING MOLEX	737-119
	TYRAP, NYLON 0.725 BDL DIA MAX	756-101
	LABEL, AC VOLTAGE	729-151
	SCREW, 4-40 × 5/16 FLH PHH SST	719-198
	SCREW, 4-40 × 5/16 PAN HD PHH SST	719-106
	SCREW, 2-56 × 5/16 PAN HD PHH SST	719-105
	SCREW, 4-40 × 3/4 PAN HD PHH SST	719-125
	SCREW, 6-32 × 7/16 PAN HD PHH SST	719-114
	SCREW, 4-40 × 3/16 PAN HD PHH SST	719-101
	SCREW, 6-32 × 3/4 PAN HD PHH SST	719-126
	SCREW, 6-32 × 3/8 FLH PHH SST	719-150
	WASHER, FLAT #2 SST	723-101
	WASHER, FLAT #4 SST	723-102
	WASHER, FLAT #8 SST	723-104

POWER SUPPLY MODULE 1846 (continued)

REF DES	DESCRIPTION	PART NUMBER
HARDWARE	WASHER, LOCK SPLIT #2 SST	724-105
	WASHER, LOCK SPLIT #4 SST	724-101
	WASHER, LOCK SPLIT #8 SST	724-103
	WASHER, LOCK SPLIT #6 SST	724-102
	NUT, HEX #2 SST	715-101
	NUT, HEX #8 SST	715-109
	NUT, HEX #4 SST	715-107
	NUT, HEX #6 SST	715-108
	NUT, HEX SM PATT #6 SST	715-103

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DISPLAY BOARD 1846

REF DES	DESCRIPTION	PART NUMBER
U9, 14, 15	IC, 7406 DGTL HEX INV BFR/DRVR	620-137
U11, 12	IC, 4511 CMOS BCD TO 7 SEGMENT	619-131
U4, 22	IC, 2003 CMOS 7 SEGMENT DRIVER	619-104
U26	IC, 74LS75 DGTL DUAL 2 BIT LATCH	620-121
U16	IC, 74LS138 DGTL 1OF8 DCDR/DEMUX	620-127
U27	IC, 74LS122 DGTL RE-TRIG OSMV	620-134
U8	IC, 74LS26 DGTL NAND BFR 2-INPUT	620-136
U10, 13	IC, 3082 ARRAY 7 TRANSISTOR CC	625-103
U1-3, 5-7, 19-21, 23-25	DISPLAY, LED, 7 SEGMENT, RED	614-123
U17, 18	DISPLAY, LED, 7 SEGMENT, ORANGE	614-122
CR1-CR4	LAMP, LED YEL LG RECTANGULAR	614-124
CR5, 6	DIO, RECT 1AMP 400V 1N4004	610-103
RN1	RES, NETWORK 4.7-13 KOHM 2%	656-104
RN2	RES, NETWORK 7-10 KOHMS 2%	656-107
R20	RES, CF 82 KOHM 5% 1/4W	650-180
R3-5, 17-19	RES, CF 120 OHM 5% 1/4W	650-110
R6, 7	RES, CF 180 OHM 5% 1/4W	650-122
R2, 10-16, 21-27	RES, MF 82 OHM 1% 1/2W	653-122
R8, 9, 28	RES, MF 27 OHM 1% 1/8W	652-200
C1, 2	CAP, TANTALUM 22UF 20V 20%	603-104
C3, 4, 5	CAP, CERAMIC 0.1UF 50V 20%	602-106
C6	CAP, POLYESTER 0.1UF 100V 5%	603-113
J6	CONTACT, PIN 0.025SQ POST	608-138
J8	CONN, 20 POSN SINGLE IN LINE PC	607-276
XU17, 18	SOCKET, 14 PIN DIP 3 LEVEL WW	607-281
HARDWARE	SOCKET, 15 POSN SINGLE IN LINE	607-312
	SOCKET, 3 POSN SINGLE IN LINE	607-313
	SPACER, 0.156 OD, 0.047 ID, 0.020L	735-194
	SPACER, 0.156 OD, 0.047 ID, 0.090L	735-196

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PNEUMATIC MODULE 1846

REF DES	DESCRIPTION	PART NUMBER
V1	AIR VALVE PREP V1	320-291
V2	AIR VALVE PREP V2	320-292
V3	AIR VALVE PREP V3	320-293
J1, 2, 3	TERMINAL, INSUL PRESS FIT 0.149D	734-137
1	CHASSIS PNEUMATICS MODULE 1846	702-148
2	PUMP, AIR PREP, 110/120 VOLT	320-219
3	RELAY, SOLID STATE OPT COUPLED	648-108
4	SW, PRESSURE ADJUSTED 275 MMHG	662-136
5	FITTING, BULKHEAD CUFF CONN	704-454
6	CABLE ASSY PNEU MOD/CPU PWB	316-207
HARDWARE	W10 WIRE PREP 1846 PNEU MODULE	316-173
	AIR HARNESS ASSY	330-026
	FITTING, ADAPTER, 10-32 to 1/8 ID	712-115
	WRAP, WIRE HARNESS 3/16 to 1.5 OD	756-116
	TYRAP, NYLON 0.725 BDL DIA MAX	756-101
	SCREW, 6-32 × 1/4 100 DEG SST	719-214
	WASHER, FLAT SMALL PATTERN #4	723-106
	WASHER, LOCK SPLIT #4 SST	724-101
	WASHER, LOCK, FL-INT TOOTH #3/8	724-111
	NUT, SELF-LOCKING, NYLON INSR #8	716-406
	NUT, HEX SM PATT # 4 SST	715-102
	NUT, JAM	712-153

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MODEL 1846P PRINTER CONTROL BOARD

REF DES	DESCRIPTION	PART NUMBER
U1	IC, 555 LIN TIMER	621-117
U2	IC, 74LS123 DGTL DUAL MULVIB	620-132
U3	IC, 74LS74 DGTL "D" FLIP FLOP	620-130
U4	IC, 74LS14 DGTL HEX INV SCHMITT	620-131
U5	SOFTWARE ASSY, 1846P PTR SKOFIX	365-046
U6	IC, 1863 NMOS UART SGL SUPPLY	622-112
U7	IC, 1256DGTL 7 STG DR VR/MOT DRVR	620-146
U8	IC, 4049U CMOS INVERTER	619-111
Q1, 3, 4	XSTR, AMPL NPN 2N4401	674-102
Q2, 5, 6	XSTR, AMPL PNP 2N4403	674-103
CR1-4,8	DIO, SW 200MA 75V 4PF 1N4148	610-104
CR7	DIO, GERMANIUM SIGNAL 1N270	610-401
CR5	DIO, RECT 1 AMP 400V 1N4004	610-103
Y1	CRYSTAL, 5 MHZ HC-18/U .0025%	609-108
X1	IC, PHOTO REFL 8W 0.012 IN	625-105
RN1, 2	RES NETWORK 7-10 KOHMS 2%	656-107
R1	RES, CF 6.8 KOHM 5% ¼W	650-174
R2, 8, 16, 25, 26,28,30	RES, CF 1 KOHM 5% ¼W	650-102
R3, 32	RES, CF 270 OHM 5% ¼W	650-138
R4	RES, CF 56.2 KOHM	652-162
R6	RES, CF 820 OHM 5% ¼W	650-194
R7	RES, CF 220 KOHM 5% ¼W	650-132
R9	RES, CF 150 KOHM 5% ¼W	650-119
R10	RES, CF 22 KOHM 5% ¼W	650-131
R11	RES, CF 20 KOHM 5% ¼W	650-127
R12	RES, CF 2 KOHM 5% ¼W	650-126
R13,22	RES, CF 100 KOHM 5% ¼W	650-104
R14	RES, CF 27 KOHM 5% ¼W	650-139
R15,21,23 24,27	RES, CF 10 KOHM 5% ¼W	650-103
R17,18	RES, CF 180 KOHM 5% ¼W	650-124
R19, 31,33	RES, CF 180 OHM 5% ¼W	650-122
R29	RES, CF 4.7 KOHM 5% ¼W	650-157
R5,20	POT, 20 KOHMS 10% 0.5W 12 TURN	630-135

MODEL 1846P PRINTER CONTROL BOARD (continued)

REF DES	DESCRIPTION	PART NUMBER
C1	CAP, POLYESTER .001UF 100V 5%	603-106
C2,14	CAP, TANTALUM 1UF 35V 20%	603-101
C3,10,12,16	CAP, CERAMIC .01UF 50V 20%	602-119
C4	CAP, POLYESTER .22UF 100V 5%	603-122
C5	CAP, TANTALUM 4.7UF 20V 20%	603-105
C6	CAP, CERAMIC 820PF 50V 10% AXIAL	602-157
C7,8	CAP, MICA 20PF 100V 5%	602-114
C9,13	CAP, TANTALUM 22UF 20V 20%	603-104
C11	CAP, CERAMIC 560PF 50V 10% AXIAL	602-155
C18	CAP, POLYESTER .0022UF 100V 5%	603-118
C15,17	CAP, ELCTLT 2200UF 35V AXIAL	604-125
J1	CONN, HEADER ASSY SHRD 8 PIN	607-368
J2	CONN, 15 POSN RT ANGLE FL CABLE	607-366
J3	CONN, HEADER ASSY SHRD 4 PIN	607-374
J4	CONN, HEADER ASSY SHRD 3 PIN	607-369
XU5,6	SOCKET, DIP LO-PROFILE 40 PIN	607-170
HARDWARE	TERMINAL, TUBULAR FOR 0.062 BRD	734-102
	WIRE, 26 AWG SOLID WHITE	680-110